3625 Del Amo Boulevard, Suite 180 Torrance, California 90503-1643 (310) 370-8370 (310) 370-7026 FAX www.hygienetech.com

May 12, 2014

California State Board of Equalization 450 N Street Sacramento, California 94279

Document No. 21404001.1

Attention: David Gau

Regarding: Limited Fungal Growth Exposure Assessment Surveys

April 2014 Random Sampling

Dear Mr. Gau:

On April 4, 14, 21, and 29, 2014, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted limited fungal growth exposure assessment surveys involving 22 randomly selected areas located within the California State Board of Equalization (BOE) building. The findings of the surveys, along with the analytical data, conclusions, and recommendations when applicable, appear below.

On the survey dates, air samples were collected for total (viable and nonviable) fungi analyses using a Zefon brand Bio-Pump  $Plus^{\mathsf{T}}$  equipped with Air-O-Cell cassettes. All such samples were subsequently analyzed for fungi (including yeasts, molds, rusts, smuts, and mushrooms) by trained and experienced microbiologists at a laboratory accredited by the American Industrial Hygiene Association (AIHA) and that successfully participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program. The airborne fungi assessment analytical data with supporting and background information appear in the enclosed table.

As presented in Table 21404001-1, the airborne spore count data recorded showed fungal spore types outdoors such as *Alternaria*, ascospores, basidiospores, *Botrytis*, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium/Aspergillus* species, *Epicoccum*, *Oidium*, other brown, *Nigrospora*, rusts, smuts, *Stemphylium*, and/or *Torula*. In the indoor areas tested, the data showed that airborne fungal spores were either not detected at or above the laboratory detection limit indicated or were detected at low airborne concentrations. The fungal spore types found indoor included ascospores, basidiospores, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium/Aspergillus* species, *Epicoccum*, *Helicoma*, other brown, *Nigrospora*, rusts, smuts, and/or *Stemphylium*. The distribution of fungal spore types detected in the surveyed areas was consistent with those found outdoors, and the overall data within the tested areas were well below the overall outdoor data recorded. These data are considered unremarkable and are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

Mr. David Gau May 12, 2014 Document No. 21404001.1 – April 2014 Random Sampling Page 2



Be advised that the data provided in this report only represent limited fungal growth and exposure potentials that existed at the time these surveys were performed and at the precise sample locations indicated. Note that fungal growth and exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors. Also be advised that additional fungal growth may exist at one or more locations in the structure that were not specifically assessed during the surveys.

If you have any comments or questions regarding the information contained in this correspondence, please feel free to contact our offices directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Kenny K. Hsi, CIH Technical Director



CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279 TABLE 21404001-1
AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

Page 1

Results reported in spores per cubic meter of air (spores/M³)									
SAMPLE NUMBER	21404001-1 TM01OUT	21404001-1 TM02	21404001-1 TM03	21404001-1 TM04					
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 10 feet south of building; approximately five feet above ground/Normal outdoor activities	3rd Floor; Column N23 area; Cubicle at Column N23; approximately five feet above floor/Normal office activities	5 <sup>th</sup> Floor; Copy Room 506; about center; approximately five feet above floor/Normal office activities	10 <sup>th</sup> Floor; Column J18 area; Cubicle at Column J18; about center; approximately five feet above floor/Normal office activities					
DATE	04/04/14	04/04/14	04/04/14	04/04/14					
START/STOP	15:41:00/15:461:00	15:51:00/15:56:00	16:00:00/16:05:00	16:09:00/16:14:00					
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes					
Alternaria	13								
Ascospores	430		53						
Basidiospores	53								
Bipolaris/Drechslera group									
Botrytis									
Chaetomium									
Cladosporium			110	53					
Curvularia									
Epicoccum									
Fusarium									
Nigrospora									
Oidium									
Other brown									
Other colorless									
Penicillium/Aspergillus types									
Pithomyces									
Rusts									
Smuts (Periconia, Myxomycetes)		13	27						
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Hyphal fragments	<13	<13	<13	<13					
Background debris*	1+	2+	1+	2+					
TOTAL**	490	13	190	53					

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

APPENDIX A

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279 TABLE 21404001-1
AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

Page 2

Results reported in spores per cubic meter of air (spores/M <sup>3</sup> )										
SAMPLE NUMBER	21404001-1 TM05	21404001-1 TM06	21404001-1 TM07OUT	21404001-1 TM08						
SAMPLING LOCATION/ACTIVITIES	15 <sup>th</sup> Floor; Column K21 area; about 15 feet northwest of Column K21, approximately five feet above floor/Normal office activities	19 <sup>th</sup> Floor; area between Column L17 and M17; Cubicle 131.1; approximately five feet above floor/Normal office activities	Outdoors; about 15 feet east of building; approximately five feet above ground/Normal outdoor activities	1 <sup>st</sup> Floor; Mail Room 143; reception area; about center; approximately five feet above floor/Normal office activities						
DATE	04/04/14	04/04/14	04/14/14	04/14/14						
START/STOP	16:17:00/16:22:00	16:26:00/16:31:00	15:30:00/15:35:00	15:40:00/15:45:00						
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes						
Alternaria										
Ascospores			750							
Basidiospores			1,300	53						
Bipolaris/Drechslera group										
Botrytis										
Chaetomium			13							
Cladosporium		110	1,800							
Curvularia										
Epicoccum										
Fusarium										
Nigrospora				13						
Oidium			40							
Other brown			13	13						
Penicillium/Aspergillus types			110							
Pithomyces										
Rusts			750	40						
Smuts (Periconia, Myxomycetes)			27							
Stachybotrys										
Stemphylium										
Torula										
Trichocladium										
Ulocladium										
Zygomycetes										
Hyphal fragments	<13	<13	80	13						
Background debris*	2+	1+	2+	2+						
TOTAL**	<13	110	4,700	120						

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

APPENDIX A

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AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

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Results reported in spores per cubic meter of air (spores/M³)									
SAMPLE NUMBER	21404001-1 TM09	21404001-1 TM10	21404001-1 TM11	21404001-1 TM12					
SAMPLING LOCATION/ACTIVITIES	7 <sup>th</sup> Floor; Column K20 area; about 20 feet northwest of Column K20; approximately five feet above floor/Normal office activities	11 <sup>th</sup> Floor; Column J21 area; about five feet northeast of Column J21; Cubicle 10; approximately five feet above floor/Normal office activities	17 <sup>th</sup> Floor; Break Room 1710; about center; approximately five feet above floor/Normal office activities	21st Floor; Northern corridor; about five feet northwest of northwestern stairwell entry door; approximately five feet above floor/Normal office activities					
DATE	04/14/14	04/14/14	04/14/14	04/14/14					
START/STOP	15:49:00/15:54:00	15:58:00/16:03:00	16:06:00/16:11:00	16:12:00/16:17:00					
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes					
Alternaria									
Arthrinium									
Ascospores									
Basidiospores									
Bipolaris/Drechslera group									
Botrytis									
Chaetomium	13								
Cladosporium			53	53					
Curvularia									
Epicoccum									
Fusarium									
Nigrospora									
Oidium									
Other brown				13					
Penicillium/Aspergillus types									
Pithomyces									
Rusts			13						
Smuts (Periconia, Myxomycetes)									
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Hyphal fragments	<13	<13	<13	<13					
Background debris*	2+	2+	2+	2+					
TOTAL**	13	<13	67	67					

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

**APPENDIX A** 

**CLIENT: California State Board of Equalization** 450 N Street Sacramento, California 94279

TABLE 21404001-1 AIRBORNE TOTAL FUNGI RESULTS **450 N STREET** SACRAMENTO, CALIFORNIA APRIL 4, 14, 21, AND 29, 2014

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Results reported in spores per cubic meter of air (spores/M³)										
SAMPLE NUMBER	21404001-1 TM13	21404001-1 TM14OUT	21404001-1 TM15	21404001-1 TM16						
SAMPLING LOCATION/ACTIVITIES	23 <sup>rd</sup> Floor; Column J21 area; Cubicle 34; about center; approximately five feet above floor/Normal office activities	Outdoors; about 10 feet west of building; approximately five feet above ground/Normal outdoor activities	4 <sup>th</sup> Floor; Column N21 area; Cubicle 14; about center; approximately five feet above floor/Normal office activities	9 <sup>th</sup> Floor; Column N22 area; about 15 feet southeast of Column N22; approximately five feet above floor/Normal office activities						
DATE	04/14/14	04/21/14	04/21/14	04/21/14						
START/STOP	16:20:00/16:25:00	14:45:00/14:50:00	14:54:00/14:59:00	15:02:00/15:07:00						
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes						
Alternaria		27								
Ascospores		160								
Basidiospores		530		53						
Bipolaris/Drechslera group										
Botrytis		13								
Chaetomium		27								
Cladosporium		4,600		53						
Curvularia										
Epicoccum		13								
Nigrospora										
Oidium		110								
Other brown										
Other colorless										
Penicillium/Aspergillus types										
Pithomyces										
Rusts		110								
Smuts (Periconia, Myxomycetes)		810		27						
Stachybotrys										
Stemphylium										
Torula		40								
Ulocladium										
Zygomycetes										
Hyphal fragments	<13	200	<13	<13						
Background debris*	2+	3+	1+	2+						
TOTAL**	<13	6,400	<13	130						

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.



CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279 TABLE 21404001-1
AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

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Results reported in spores per cubic meter of air (spores/M³)										
SAMPLE NUMBER	21404001-1 TM17	21404001-1 TM18	21404001-1 TM19	21404001-1 TM20OUT						
SAMPLING LOCATION/ACTIVITIES	16 <sup>th</sup> Floor; Column N19 area; about eight feet	20 <sup>th</sup> Floor; Men's Restroom; about	22 <sup>nd</sup> Floor; Room 2208; about center;	Outdoors; about 10 feet east of building						
	southwest of Column N19; approximately five	center' approximately five feet above	approximately five feet above	approximately five feet above						
	feet above floor/Normal office activities	floor/Normal restroom activities	floor/Normal office activities	ground/Normal outdoor activities						
DATE	04/21/14	04/21/14	04/21/14	04/29/14						
START/STOP	15:11:00/15:16:00	15:19:00/15:24:00	15:33:00/15:38:00	14:15:00/14:20:00						
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes						
Alternaria				210						
Ascospores				40						
Basidiospores				390						
Bipolaris/Drechslera group										
Botrytis										
Chaetomium				27						
Cladosporium	53		53	1,500						
Curvularia										
Epicoccum										
Fusarium										
Myrothecium										
Nigrospora				53						
Oidium										
Other brown			13	13						
Penicillium/Aspergillus types	53									
Pithomyces										
Rusts	13			320						
Smuts (Periconia, Myxomycetes)			27	960						
Stemphylium				53						
Stachybotrys										
Torula										
Ulocladium										
Zygomycetes										
Hyphal fragments	<13	27	<13	330						
Background debris*	2+	2+	2+	2+						
TOTAL**	120	<13	93	3,600						

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.



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AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

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Results reported in spores per cubic meter of air (spores/M³)									
SAMPLE NUMBER	21404001-1 TM21	21404001-1 TM22	21404001-1 TM23	21404001-1 TM24					
SAMPLING LOCATION/ACTIVITIES	2 <sup>nd</sup> Floor; Column N19 area; about 15 feet southwest of Column N19; approximately five feet above floor/Normal office activities	6 <sup>th</sup> Floor; Mail Room 6B; about center; approximately five feet above floor/Normal office activities	8 <sup>th</sup> Floor; Column N20 area; Cubicle 143; about center; approximately five feet above floor/Normal office activities	14 <sup>th</sup> Floor; Conference Room 1406; about five feet south of entry door; approximately feet above floor/Normal office activities					
DATE	04/29/14	04/29/14	04/29/14	04/29/14					
START/STOP	14:25:00/14:30:00	14:33:00/14:38:00	14:42:00/14:47:00	14:51:00/14:56:00					
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes					
Alternaria									
Ascospores	53			53					
Basidiospores	53								
Bipolaris/Drechslera group									
Botrytis									
Chaetomium									
Cladosporium	53								
Curvularia									
Epicoccum									
Fusarium									
Myrothecium									
Nigrospora									
Oidium									
Other brown		13		13					
Penicillium/Aspergillus types									
Pithomyces									
Rusts									
Smuts (Periconia, Myxomycetes)	40								
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Hyphal fragments	27	<13	<13	13					
Background debris*	2+	2+	3+	2+					
TOTAL**	200	13	<13	67					

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

APPENDIX A

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AIRBORNE TOTAL FUNGI RESULTS
450 N STREET
SACRAMENTO, CALIFORNIA
APRIL 4, 14, 21, AND 29, 2014

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				Page 7
SAMPLE NUMBER	21404001-1 TM25	21404001-1 TM26		
SAMPLING LOCATION/ACTIVITIES	18 <sup>th</sup> Floor; Eastern corridor; about center; approximately five feet above floor/Normal building activities	24 <sup>th</sup> Floor; Room 2445; about center; approximately five feet above floor/Normal office activities	This column intentionally left blank	This column intentionally left blank
DATE	04/29/14	04/29/14		
START/STOP	15:00:00/15:05:00	15:09:00/15:14:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria				
Ascospores				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	110	270		
Curvularia				
Epicoccum		13		
Helicoma		13		
Myrothecium				
Nigrospora				
Oidium				
Other brown				
Penicillium/Aspergillus types		53		
Pithomyces				
Rusts	13			
Smuts (Periconia, Myxomycetes)	13	40		
Stachybotrys				
Stemphylium		13		
Torula				
Ulocladium				
Hyphal fragments	13	27		
Background debris*	2+	2+		
TOTAL**	130	400		

<sup>\*</sup>Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

<sup>\*\*</sup>Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.



Report for:

Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Hygiene Technologies International, Inc. 3625 Del Amo Boulevard, Suite 180 Torrance, CA 90503-8370

Regarding: Project: 21404001-1

EMĹ ID: 1192641

Approved by:

Tachnical Managar

Technical Manager Melissa Tracey Dates of Analysis:

Spore trap analysis: 04-07-2014

Service SOPs: Spore trap analysis (1038) AIHA-LAP, LLC accredited service, Lab ID #179768

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	21404001-	1 TM01 OUT	2140400	01-1 TM02	214040	01-1 TM03
Comments (see below)	None		None		ľ	None
Lab ID-Version‡:	541	0097-1	5410098-1		5410099-1	
Analysis Date:	04/0	07/2014	04/0	07/2014	04/0	07/2014
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	1	13		_		-
Ascospores	8	430			1	53
Basidiospores	1	53				
Botrytis						
Chaetomium						
Cladosporium					2	110
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes			1	13	2	27
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+		2+		1+	
Hyphal fragments/m3	< 13		< 13		< 13	
Pollen/m3	110		13		< 13	
Skin cells (1-4+)	< 1+		1+		< 1+	
Sample volume (liters)	75		75		75	
§ TOTAL SPORES/m3		490		13		190

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC EMLab ID: 1192641, Page 2 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	214040	01-1 TM04	2140400	01-1 TM05	2140400	01-1 TM06
Comments (see below)	None		None		N	Vone
Lab ID-Version‡:	541	0100-1	541	0101-1	5410102-1	
Analysis Date:	04/0	07/2014	04/0	07/2014	04/0	07/2014
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria		_		_		_
Ascospores						
Basidiospores						
Botrytis						
Chaetomium						
Cladosporium	1	53			2	110
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	2+		2+		1+	
Hyphal fragments/m3	< 13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13	
Skin cells (1-4+)	1+		< 1+		< 1+	
Sample volume (liters)	75		75		75	
§ TOTAL SPORES/m3		53		< 13		110

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC

EMLab ID: 1192641, Page 3 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

# MoldRANGE<sup>TM</sup>: Extended Outdoor Comparison Outdoor Location: 21404001-1 TM01 OUT

Fungi Identified	Outdoor	Typical Outdoor Data for:				Typical Outdoor Data for:							
	data	Ap	oril in (	Califor	nia† (n	=1792	22)	The er	ntire yea	ar in Ca	lifornia	† (n‡=20	00710)
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	13	13	13	27	53	93	54	13	13	27	67	110	53
Bipolaris/Drechslera group	-	7	13	13	27	40	9	7	13	13	27	40	12
Chaetomium	-	8	13	13	27	40	18	8	13	13	27	47	19
Cladosporium	-	110	160	430	1,100	1,900	96	110	210	610	1,600	2,800	97
Curvularia	-	7	8	13	13	27	2	7	13	13	27	53	6
Nigrospora	-	7	10	13	13	27	4	7	13	13	27	53	8
Penicillium/Aspergillus types	-	53	53	160	430	690	79	53	100	210	590	1,000	84
Stachybotrys	-	8	13	13	33	67	5	7	13	13	33	67	4
Torula	-	11	13	13	42	73	14	8	13	13	40	67	12
Seldom found growing indoors**													
Ascospores	430	27	53	110	370	710	74	25	53	110	360	690	71
Basidiospores	53	53	80	270	930	1,900	93	53	80	260	990	2,300	93
Rusts	-	13	13	24	53	93	34	13	13	13	53	80	26
Smuts, Periconia, Myxomycetes	-	13	13	40	110	210	67	13	13	40	110	210	68
§ TOTAL SPORES/m3	490												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

 $\ddagger n = number of samples used to calculate data.$ 

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

EMLab P&K, LLC EMLab ID: 1192641, Page 1 of 1

<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 21404001-1 TM01 OUT:

Species detected		Outdoo	r sample sj	pores/m3	Typical outdoor ranges	Freq.
	<100	1K	10K	>100K	(North America)	%
Alternaria				13	7 - 33 - 590	45
Ascospores				430	13 - 210 - 5,800	76
Basidiospores				53	17 - 450 - 24,000	92
Cladosporium				< 13	27 - 480 - 10,000	90
Penicillium/Aspergillus types				< 13	13 - 170 - 2,700	68
Smuts, Periconia, Myxomycetes				< 13	7 - 53 - 930	64
Total				490		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

**Location:** 21404001-1 TM02

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		(indoor/outdoor) correlation*** (indoor/		MoldSCORE**** (indoor/outdoor)
Result: 2%	dF: 4 Result: 5.6667 Critical value: 9.4877 Inside Similar: Yes	Result: 0.0000		dF: 4 Result: -0.4000 Critical value: N/A Outside Similar: N/A		Score: 103 Result: Low		
Species 1	Detected			Spor	es/m3			
		<100	1K		10K	>100K		
Smuts, F	Periconia, Myxomycetes					13		
	Total					13		

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement (indoor/or		Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)				
Result: 38%	dF: 4 Result: 5.6667 Critical value: 9.4877 Inside Similar: Yes	Result: 0.3333		dF: 5 Result: -0.2000 Critical value: 0.8000 Outside Similar: No	Score: 107 Result: Low				
Species	Detected	Spores/m3							
		<100	1K	10K	>100K				
	Ascospores				53				
	Cladosporium				110				
Smuts, F	Smuts, Periconia, Myxomycetes				27				
	Total				190				

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1 TM04

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio* (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)				
Result: 10%	dF: 4 Result: 5.6667 Critical value: 9.4877 Inside Similar: Yes	Result: 0.0000	dF: 4 Result: -0.4000 Critical value: N/A Outside Similar: N/A	Score: 103 Result: Low				
Species 1	Detected		Spores/m3					
		<100	X 10K	>100K				
	Cladosporium			53				
	Total			53				

**Location:** 21404001-1 TM05

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)			
Result: < 1%	dF: 4 Result: 5.6667 Critical value: 9.4877 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low			
Species 1	Detected		Spores/m3				
		<100 1K	10K	>100K			
	None Detected			< 13			

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		ement ratio** loor/outdoor)	correl	nan rank ation*** /outdoor)	MoldSCORE**** (indoor/outdoor)		
Result: 22%	dF: 4 Result: 5.6667 Critical value: 9.4877 Inside Similar: Yes	R	esult: 0.0000	Result Critical	F: 4 :: -0.4000 value: N/A Similar: N/A	Score: 107 Result: Low		
Species 1	Detected	×100	1 <i>V</i>	res/m3	> 100V			
	Cladosporium	<100	1K		10K	>100K		
	Ciadosporium <b>Total</b>					110		

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

\*\* An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

\*\*\* The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

EMLab P&K, LLC EMLab ID: 1192641, Page 3 of 3

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

**MoldSCORE**<sup>TM</sup>: **Spore Trap Report Outdoor Sample:** 21404001-1 TM01 OUT

Fungi Identified	Ou	td	00	r sa	mp	le	spo	res	s/n	n3	Raw	Spores/
_	<100	)		1K			10K		>10	00K	count	m3
Generally able to grow indoors*												
Alternaria											1	13
Bipolaris/Drechslera group											ND	< 13
Chaetomium											ND	< 13
Cladosporium											ND	< 13
Curvularia											ND	< 13
Nigrospora											ND	< 13
Penicillium/Aspergillus types†											ND	< 13
Stachybotrys											ND	< 13
Torula											ND	< 13
Seldom found growing indoors**												
Ascospores											8	430
Basidiospores											1	53
Rusts											ND	< 13
Smuts, Periconia, Myxomycetes											ND	< 13
Total												493

Fungi Identified	In	do	or	sam	ıpl	e	sp	or	es/	m.	3	Raw	Spores/
	<100	)		1K			1	0K		>10	0K	count	m3
Generally able to grow indoors*													
Alternaria												ND	< 13
Bipolaris/Drechslera group												ND	< 13
Chaetomium												ND	< 13
Cladosporium												ND	< 13
Curvularia												ND	< 13
Nigrospora												ND	< 13
Penicillium/Aspergillus types†												ND	< 13
Stachybotrys												ND	< 13
Torula												ND	< 13
Seldom found growing indoors**													
Ascospores												ND	< 13
Basidiospores												ND	< 13
Rusts												ND	< 13
Smuts, Periconia, Myxomycetes												1	13
Total													13

100	MoldSCORE; Score 200 300 Score								
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			103						
Fina	Final MoldSCORE								

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1 TM03

Fungi Identified	Indo	or	sam	ple	spor	es/n	n3	Raw	Spores/
	<100		1K		10K	>	100k	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								2	110
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								1	53
Basidiospores								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								2	27
Total			·						187

MoldSCORE 200 300	
	100
	100
	100
	107
	100
	100
	100
	100
	100
	105
	100
	100
	105
Final MoldSCORE	107

Fungi Identified	Ind	loor	san	aple	spor	es/m3	Raw	Spores/
	<100		1K		10K	>100	count	m3
Generally able to grow indoors*								
Alternaria							ND	< 13
Bipolaris/Drechslera group							ND	< 13
Chaetomium							ND	< 13
Cladosporium							1	53
Curvularia							ND	< 13
Nigrospora							ND	< 13
Penicillium/Aspergillus types†							ND	< 13
Stachybotrys							ND	< 13
Torula							ND	< 13
Seldom found growing indoors**								
Ascospores							ND	< 13
Basidiospores							ND	< 13
Rusts							ND	< 13
Smuts, Periconia, Myxomycetes							ND	< 13
Total								53

	MoldSCORE; 200 300 Score								
		100							
		100							
		100							
		103							
		100							
		100							
		100							
		100							
		100							
		100							
		100							
		100							
		100							
Final Mol	ISCORE	103							

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1 TM05

Fungi Identified	Indo	or	sam	ple	spore	es/m	13	Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								ND	< 13
Basidiospores								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								ND	< 13
Total									N/A

	MoldSCORE;							
100 200 3	300 Score							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
	100							
Final MoldSCOR	E 100							

Fungi Identified	Ind	oor s	ample	spor	es/m3	Raw	Spores/
	<100	1	K	10K	>100K	count	m3
Generally able to grow indoors*							
Alternaria						ND	< 13
Bipolaris/Drechslera group						ND	< 13
Chaetomium						ND	< 13
Cladosporium						2	110
Curvularia						ND	< 13
Nigrospora						ND	< 13
Penicillium/Aspergillus types†						ND	< 13
Stachybotrys						ND	< 13
Torula						ND	< 13
Seldom found growing indoors**							
Ascospores						ND	< 13
Basidiospores						ND	< 13
Rusts						ND	< 13
Smuts, Periconia, Myxomycetes						ND	< 13
Total							107

100	MoldSCORE; 100 200 300 Score								
			100						
			100						
			100						
			107						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Final	Final MoldSCORE								

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-04-2014 Date of Receipt: 04-07-2014 Date of Report: 04-08-2014

#### MoldSCORETM: Spore Trap Report

\* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of

a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

EMLab P&K, LLC EMLab ID: 1192641, Page 4 of 4



Report for:

Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Hygiene Technologies International, Inc. 3625 Del Amo Boulevard, Suite 180 Torrance, CA 90503-8370

Regarding: Project: 21404001-1 EML ID: 1196169

Approved by:

Technical Manager Melissa Tracey Dates of Analysis:

Spore trap analysis: 04-15-2014

Service SOPs: Spore trap analysis (1038) AIHA-LAP, LLC accredited service, Lab ID #179768

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Date of Sampling: 04-14-2014

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Date of Receipt: 04-15-2014 Re: 21404001-1 Date of Report: 04-16-2014

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	21404001-1 TM07 OUT		21404001-1 TM08		2140400	01-1 TM09	21404001-1 TM10		
Comments (see below)		Vone	N	Vone	N	Vone	None		
Lab ID-Version‡:	542	5428005-1		5428006-1		5428007-1		5428008-1	
Analysis Date:	04/1	5/2014	04/1	5/2014	04/1	5/2014	04/15/2014		
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	
Ascospores	14	750	10000	50108/1110	10000	50105/1110	10000	50105/1110	
Basidiospores	24	1,300	1	53					
Chaetomium	1	13			1	13			
Cladosporium	33	1,800							
Epicoccum		ĺ							
Fusarium									
Myrothecium									
Nigrospora			1	13					
Oidium	3	40							
Other brown	1	13	1	13					
Other colorless									
Penicillium/Aspergillus types†	2	110							
Pithomyces									
Rusts	56	750	3	40					
Smuts, Periconia, Myxomycetes	2	27							
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Zygomycetes									
Background debris (1-4+)††	2+		2+		2+		2+		
Hyphal fragments/m3	80		13		< 13		< 13		
Pollen/m3	170		27		< 13		< 13		
Skin cells (1-4+)	< 1+		1+		2+		1+		
Sample volume (liters)	75		75		75		75		
§ TOTAL SPORES/m3		4,700		120		13		< 13	

#### **Comments:**

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC EMLab ID: 1196169, Page 2 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	214040	01-1 TM11	2140400	01-1 TM12	21404001-1 TM13		
Comments (see below)	1	None	N	Vone	N	None	
Lab ID-Version‡:	542	8009-1	5428010-1		542	8011-1	
Analysis Date:	04/1	15/2014	04/1	5/2014	04/1	15/2014	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	
Ascospores		_		_		_	
Basidiospores							
Chaetonium							
Cladosporium	1	53	1	53			
Curvularia							
Epicoccum							
Fusarium							
Myrothecium							
Nigrospora							
Oidium							
Other brown			1	13			
Other colorless							
Penicillium/Aspergillus types†							
Pithomyces							
Rusts	1	13					
Smuts, Periconia, Myxomycetes							
Stachybotrys							
Stemphylium							
Torula							
Ulocladium							
Zygomycetes							
Background debris (1-4+)††	2+		2+		2+		
Hyphal fragments/m3	< 13		< 13		< 13		
Pollen/m3	13		< 13		< 13		
Skin cells (1-4+)	1+		1+		1+		
Sample volume (liters)	75		75		75		
§ TOTAL SPORES/m3		67		67		< 13	

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC

EMLab ID: 1196169, Page 3 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

# MoldRANGE<sup>TM</sup>: Extended Outdoor Comparison Outdoor Location: 21404001-1 TM07 OUT

Fungi Identified	Outdoor	Typical Outdoor Data for:				ı	Typica	l Outd	loor Da	ata for	:		
	data	April in California† (n‡=17922)			The entire year in California† (n‡=200710)								
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	-	13	13	27	53	93	54	13	13	27	67	110	53
Bipolaris/Drechslera group	-	7	13	13	27	40	9	7	13	13	27	40	12
Chaetomium	13	8	13	13	27	40	18	8	13	13	27	47	19
Cladosporium	1,800	110	160	430	1,100	1,900	96	110	210	610	1,600	2,800	97
Curvularia	-	7	8	13	13	27	2	7	13	13	27	53	6
Nigrospora	-	7	10	13	13	27	4	7	13	13	27	53	8
Other brown	13	13	13	13	40	53	33	13	13	13	40	53	34
Penicillium/Aspergillus types	110	53	53	160	430	690	79	53	100	210	590	1,000	84
Stachybotrys	-	8	13	13	33	67	5	7	13	13	33	67	4
Torula	-	11	13	13	42	73	14	8	13	13	40	67	12
Seldom found growing indoors**													
Ascospores	750	27	53	110	370	710	74	25	53	110	360	690	71
Basidiospores	1,300	53	80	270	930	1,900	93	53	80	260	990	2,300	93
Oidium	40	13	13	27	53	93	31	13	13	13	44	75	19
Rusts	750	13	13	24	53	93	34	13	13	13	53	80	26
Smuts, Periconia, Myxomycetes	27	13	13	40	110	210	67	13	13	40	110	210	68
§ TOTAL SPORES/m3	4,700												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

 $\ddagger$ n = number of samples used to calculate data.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

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<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

<sup>\*\*</sup> These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 21404001-1 TM07 OUT:

Species detected		Outdoor	r sample s	pores/m3	Typical outdoor ranges	Freq.
	<100	1K	10K	>100K	(North America)	%
Ascospores				750	13 - 210 - 5,800	76
Basidiospores				1,300	19 - 450 - 24,000	92
Chaetomium				13	7 - 13 - 160	9
Cladosporium				1,800	27 - 480 - 10,000	90
Oidium				40	7 - 13 - 230	11
Other brown				13	7 - 13 - 130	23
Penicillium/Aspergillus types				110	13 - 170 - 2,700	68
Rusts				750	7 - 20 - 360	20
Smuts, Periconia, Myxomycetes				27	7 - 53 - 930	64
Total				4,700		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		ent ratio** /outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)		
Result: 2%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.4615		dF: 10 Result: 0.1606 Critical value: 0.5515 Outside Similar: No	Score: 110 Result: Low		
Species 1	Detected	Spores/m3					
		<100	1K	10K	>100K		
	Basidiospores				53		
	Nigrospora				13		
Other brown					13		
Rusts					40		
	Total				120		

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

## MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1 TM09

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		corre	man rank lation*** r/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.2000		dF: 9 Result: 0.0958 Critical value: 0.5833 Outside Similar: No		Score: 121 Result: Low	
Species	Detected			Spo	ores/m3		
		<100	1K		10K	>100K	
	Chaetomium					13	
	Total					13	

**Location:** 21404001-1 TM10

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		ment ratio** or/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.3636		dF: 9 Result: 0.6750 Critical value: 0.5833 Outside Similar: Yes	
Species	Detected			Spores/m3	
		<100	1K	10K	>100K
	Cladosporium				53
Rusts					13
	Total				67

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1 TM12

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)		
Result: 1%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.3417 Critical value: 0.5833 Outside Similar: No	Score: 105 Result: Low		
Species	Detected		Spores/m3			
		<100 1K	10K	>100K		
	Cladosporium			53		
Other brown				13		
	Total			67		

**Location:** 21404001-1 TM13

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 5 Result: 5.2381 Critical value: 11.0705 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			< 13

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

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<sup>\*\*</sup> An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

<sup>\*\*\*</sup> The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

EMLab P&K, LLC EMLab ID: 1196169, Page 4 of 4

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

**MoldSCORE**<sup>TM</sup>: **Spore Trap Report Outdoor Sample:** 21404001-1 TM07 OUT

Fungi Identified	Οι	ıtd	00	r sa	mp	le	spo	res	s/m	3	Raw	Spores/
	<10	0		1K			10K		>100	)K	count	m3
Generally able to grow indoors*												
Alternaria											ND	< 13
Bipolaris/Drechslera group											ND	< 13
Chaetomium											1	13
Cladosporium											33	1,800
Curvularia											ND	< 13
Nigrospora											ND	< 13
Other brown											1	13
Penicillium/Aspergillus types†											2	110
Stachybotrys											ND	< 13
Torula											ND	< 13
Seldom found growing indoors**												
Ascospores											14	750
Basidiospores											24	1,300
Oidium											3	40
Rusts											56	750
Smuts, Periconia, Myxomycetes											2	27
Total												4,733

Fungi Identified	In	do	or	sa	mj	ole	S	poi	res	/n	13	Raw	Spores/
	<100	)		1K				10K		>1	100I	count	m3
Generally able to grow indoors*													
Alternaria												ND	< 13
Bipolaris/Drechslera group												ND	< 13
Chaetomium												ND	< 13
Cladosporium												ND	< 13
Curvularia												ND	< 13
Nigrospora												1	13
Other brown												1	13
Penicillium/Aspergillus types†												ND	< 13
Stachybotrys												ND	< 13
Torula												ND	< 13
Seldom found growing indoors**													
Ascospores												ND	< 13
Basidiospores												1	53
Rusts												3	40
Smuts, Periconia, Myxomycetes				L								ND	< 13
Total													120

100	MoldSCORE;									
100	200	300	Score							
			100							
			100							
			100							
			100							
			100							
			105							
			105							
			100							
			100							
			100							
			100							
			102							
			108							
			100							
Fina	l MoldSCC	RE	110							

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1 TM09

Fungi Identified	Indo	or	sam	ple	spor	es/i	m3	Raw	Spores/
	<100		1K		10K	3	>1001	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								1	13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								ND	< 13
Basidiospores								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								ND	< 13
Total			•		·	•			13

MoldSCORE 200 300	
	100
	100
	121
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	121

Fungi Identified	Ind	oor	san	ple :	spore	es/m3	Raw	Spores/
	<100		1K		10K	>100	count	m3
Generally able to grow indoors*								
Alternaria		Ш					ND	< 13
Bipolaris/Drechslera group		Ш					ND	< 13
Chaetomium							ND	< 13
Cladosporium							ND	< 13
Curvularia		Ш					ND	< 13
Nigrospora							ND	< 13
Penicillium/Aspergillus types†							ND	< 13
Stachybotrys							ND	< 13
Torula							ND	< 13
Seldom found growing indoors**								
Ascospores							ND	< 13
Basidiospores							ND	< 13
Rusts							ND	< 13
Smuts, Periconia, Myxomycetes							ND	< 13
Total								N/A

100	MoldSCORE; 100 200 300 Score									
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
Fina	l MoldSC	ORE	100							

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1 TM11

Fungi Identified	Ir	ıdo	or	·S	am	pl	e s	spo	re	s/r	n3		Raw	Spores/
	<10	0		1	K			10I	Κ	>	100	K	count	m3
Generally able to grow indoors*														
Alternaria													ND	< 13
Bipolaris/Drechslera group													ND	< 13
Chaetomium													ND	< 13
Cladosporium													1	53
Curvularia													ND	< 13
Nigrospora													ND	< 13
Penicillium/Aspergillus types†													ND	< 13
Stachybotrys													ND	< 13
Torula							П			П			ND	< 13
Seldom found growing indoors**														
Ascospores			П				П			П			ND	< 13
Basidiospores										П			ND	< 13
Rusts										П			1	13
Smuts, Periconia, Myxomycetes										П	Ш		ND	< 13
Total									•					67

,										
100	MoldSCORE: 200 300									
			100							
			100							
			100							
			102							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			101							
			100							
Fina	al MoldSC	ORE	102							

Fungi Identified	Inc	looi	r sa	mp	le	sp	ore	s/r	n3	Raw	Spores/
	<100		1 K	(		10	K	>	100I	count	m3
Generally able to grow indoors*											
Alternaria										ND	< 13
Bipolaris/Drechslera group										ND	< 13
Chaetomium								Ш		ND	< 13
Cladosporium										1	53
Curvularia										ND	< 13
Nigrospora										ND	< 13
Other brown										1	13
Penicillium/Aspergillus types†										ND	< 13
Stachybotrys										ND	< 13
Torula										ND	< 13
Seldom found growing indoors**											
Ascospores										ND	< 13
Basidiospores										ND	< 13
Rusts										ND	< 13
Smuts, Periconia, Myxomycetes										ND	< 13
Total											67

100 N	MoldSCORE; Score										
			100								
			100								
			100								
			102								
			100								
			100								
			105								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
Final I	MoldSCO	RE	105								

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-14-2014 Date of Receipt: 04-15-2014 Date of Report: 04-16-2014

MoldSCORETM: Spore Trap Report

**Location:** 21404001-1 TM13

Fungi Identified	Ind	loor sam	Raw	Spores/			
_		1K	10K	>100	K count	m3	
Generally able to grow indoors*							
Alternaria					ND	< 13	
Bipolaris/Drechslera group					ND	< 13	
Chaetomium					ND	< 13	
Cladosporium					ND	< 13	
Curvularia					ND	< 13	
Nigrospora					ND	< 13	
Penicillium/Aspergillus types†					ND	< 13	
Stachybotrys					ND	< 13	
Torula					ND	< 13	
Seldom found growing indoors**							
Ascospores					ND	< 13	
Basidiospores					ND	< 13	
Rusts					ND	< 13	
Smuts, Periconia, Myxomycetes					ND	< 13	
Total						N/A	

100	Score		
			100
			100
			100
			100
			100
			100
			100
			100
			100
			100
			100
			100
			100
Fina	al MoldSC	ORE	100

<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

EMLab P&K, LLC EMLab ID: 1196169, Page 4 of 4

<sup>\*\*</sup> These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

<sup>†</sup>The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

<sup>‡</sup>Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.



Report for:

Mr. Lakhpreet Sandhu Hygiene Technologies International, Inc. 3625 Del Amo Boulevard, Suite 180 Torrance, CA 90503-8370

Regarding: Project: 21404001-1 EML ID: 1199187

Approved by:

Technical Manager Melissa Tracey Dates of Analysis:

Spore trap analysis: 04-23-2014

Service SOPs: Spore trap analysis (1038) AIHA-LAP, LLC accredited service, Lab ID #179768

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	21404001	-1 TM14OUT	2140400	)1-1 TM15	21404001-1 TM16		
Comments (see below)	None		N	Vone	None		
Lab ID-Version‡:	5444102-1		544	4103-1	5444104-1		
Analysis Date:	04/23/2014		04/2	23/2014	04/23/2014		
	raw ct.	raw ct. spores/m3		spores/m3	raw ct.	spores/m3	
Alternaria	2	27		·		-	
Ascospores	3	160					
Basidiospores	10	530			1	53	
Botrytis	1	13					
Chaetomium	2	27					
Cladosporium	86	4,600			1	53	
Epicoccum	1	13					
Myrothecium							
Nigrospora							
Oidium	8	110					
Other brown							
Other colorless							
Penicillium/Aspergillus types†							
Pithomyces							
Rusts	8	110					
Smuts, Periconia, Myxomycetes	61	810			2	27	
Stachybotrys							
Stemphylium							
Torula	3	40					
Ulocladium							
Zygomycetes							
Background debris (1-4+)††	3+		1+		2+		
Hyphal fragments/m3	200		< 13		< 13		
Pollen/m3	760		< 13		< 13		
Skin cells (1-4+)	< 1+		< 1+		1+		
Sample volume (liters)	75		75		75		
§ TOTAL SPORES/m3	6,400			< 13		130	

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

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<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	214040	01-1 TM17	2140400	01-1 TM18	21404001-1 TM19		
Comments (see below)	None		N	Vone	None		
Lab ID-Version‡:	5444105-1		544	4106-1	5444107-1		
Analysis Date:	04/23/2014		04/2	23/2014	04/23/2014		
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	
Alternaria				_		_	
Ascospores							
Basidiospores							
Botrytis							
Chaetomium							
Cladosporium	1	53			1	53	
Epicoccum							
Myrothecium							
Nigrospora							
Oidium							
Other brown					1	13	
Other colorless							
Penicillium/Aspergillus types†	1	53					
Pithomyces							
Rusts	1	13					
Smuts, Periconia, Myxomycetes					2	27	
Stachybotrys							
Stemphylium							
Torula							
Ulocladium							
Zygomycetes							
Background debris (1-4+)††	2+		2+		2+		
Hyphal fragments/m3	< 13		27		< 13		
Pollen/m3	27		27		< 13		
Skin cells (1-4+)	1+		1+		1+		
Sample volume (liters)	75		75		75		
§ TOTAL SPORES/m3		120		< 13		93	

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC

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<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

# MoldRANGE<sup>TM</sup>: Extended Outdoor Comparison Outdoor Location: 21404001-1 TM14OUT

Fungi Identified	Outdoor	Outdoor Typical Outdoor Data for:					: 7	Typical Outdoor Data for:					
	data	April in California† (n‡=17922)				The entire year in California† (n‡=200710)							
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	27	13	13	27	53	93	54	13	13	27	67	110	53
Bipolaris/Drechslera group	-	7	13	13	27	40	9	7	13	13	27	40	12
Chaetomium	27	8	13	13	27	40	18	8	13	13	27	47	19
Cladosporium	4,600	110	160	430	1,100	1,900	96	110	210	610	1,600	2,800	97
Curvularia	-	7	8	13	13	27	2	7	13	13	27	53	6
Epicoccum	13	7	13	13	27	53	16	8	13	13	33	53	19
Nigrospora	-	7	10	13	13	27	4	7	13	13	27	53	8
Other brown	-	13	13	13	40	53	33	13	13	13	40	53	34
Penicillium/Aspergillus types	-	53	53	160	430	690	79	53	100	210	590	1,000	84
Stachybotrys	-	8	13	13	33	67	5	7	13	13	33	67	4
Torula	40	11	13	13	42	73	14	8	13	13	40	67	12
Seldom found growing indoors**													
Ascospores	160	27	53	110	370	710	74	25	53	110	360	690	71
Basidiospores	530	53	80	270	930	1,900	93	53	80	260	990	2,300	93
Botrytis	13	13	13	15	53	67	19	13	13	20	53	80	17
Oidium	110	13	13	27	53	93	31	13	13	13	44	75	19
Rusts	110	13	13	24	53	93	34	13	13	13	53	80	26

†The "Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

40

13

110

210

67

13

40

13

110

210

68

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

810

6,400

13

 $\ddagger$ n = number of samples used to calculate data.

Smuts, Periconia, Myxomycetes

§ TOTAL SPORES/m3

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

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<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

<sup>\*\*</sup> These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

Client: Hygiene Technologies International, Inc. C/O: Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 21404001-1 TM14OUT:

Species detected		Outdoo	r sample sp	oores/m3	Typical outdoor ranges	Freq.
	<100	1K	10K	>100K	(North America)	%
Alternaria				27	7 - 33 - 590	45
Ascospores				160	] 13 - 210 - 5,800	76
Basidiospores				530	] 19 - 450 - 24,000	92
Botrytis				13	7 - 25 - 270	6
Chaetomium				27	7 - 13 - 160	9
Cladosporium				4,600	27 - 480 - 10,000	90
Epicoccum				13	7 - 20 - 330	25
Oidium				110	7 - 13 - 230	11
Penicillium/Aspergillus types				< 13	] 13 - 170 - 2,700	68
Rusts				110	7 - 20 - 360	20
Smuts, Periconia, Myxomycetes				810	7 - 53 - 930	64
Torula				40	7 - 13 - 190	9
Total				6,400		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)		
Result: < 1%	dF: 4 Result: 4.5000 Critical value: 9.4877 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low		
Species 1	Detected		Spores/m3			
		<100 1K	10K	>100K		
	None Detected			< 13		

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

## MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1 TM16

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)				
Result: 2%	dF: 4 Result: 4.5000 Critical value: 9.4877 Inside Similar: Yes	Result: (	).4286	dF: 11 Result: 0.8000 Critical value: 0.5273 Outside Similar: Yes	Score: 104 Result: Low				
Species 1	Detected	Spores/m3							
		<100	1K	10K	>100K				
	Basidiospores				53				
	Cladosporium				53				
Smuts, Periconia, Myxomycetes		3			27				
	Total				130				

**Location:** 21404001-1 TM17

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		nt ratio** outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)				
Result: 1%	dF: 4 Result: 4.5000 Critical value: 9.4877 Inside Similar: Yes	Result	: 0.2857	dF: 12 Result: 0.2517 Critical value: 0.4965 Outside Similar: No	Score: 108 Result: Low				
Species 1	Detected	Spores/m3							
		<100	1K	10K	>100K				
	Cladosporium				53				
Penicillium/Aspergillus types					53				
	Rusts				13				
	Total				120				

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)		
Result: < 1%	dF: 4 Result: 4.5000 Critical value: 9.4877 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low		
Species 1	Detected		Spores/m3			
		<100 1K	10K	>100K		
	None Detected			< 13		

Date of Sampling: 04-21-2014

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu

Date of Receipt: 04-22-2014 Re: 21404001-1 Date of Report: 04-23-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1 TM19

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)				
Result: 1%	dF: 4 Result: 4.5000 Critical value: 9.4877 Inside Similar: Yes	Result: 0.2857		dF: 12 Result: 0.4808 Critical value: 0.4965 Outside Similar: No	Score: 108 Result: Low				
Species	Detected	Spores/m3							
		<100	1K	10K	>100K				
	Cladosporium				53				
	Other brown				13				
Smuts, Periconia, Myxomycetes					27				
	Total				93				

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

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<sup>\*\*</sup> An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

<sup>\*\*\*</sup> The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

**MoldSCORE**<sup>TM</sup>: **Spore Trap Report Outdoor Sample:** 21404001-1 TM14OUT

Fungi Identified	Ou	tdo	or	san	npl	e s	spoi	res	/m.	3	Raw	Spores/
_	<100	)		1K			10K		>100	K	count	m3
Generally able to grow indoors*												
Alternaria											2	27
Bipolaris/Drechslera group									Ш		ND	< 13
Chaetomium									Ш		2	27
Cladosporium						Ш			Ш		86	4,600
Curvularia									Ш		ND	< 13
Epicoccum											1	13
Nigrospora											ND	< 13
Penicillium/Aspergillus types†									Ш		ND	< 13
Stachybotrys											ND	< 13
Torula									Ш		3	40
Seldom found growing indoors**												
Ascospores											3	160
Basidiospores											10	530
Botrytis											1	13
Oidium					П						8	110
Rusts											8	110
Smuts, Periconia, Myxomycetes					$\prod$						61	810
Total												6,427

Fungi Identified	Inde	oor san	iple spore	Raw	Spores/	
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores					ND	< 13
Basidiospores					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes					ND	< 13
Total						N/A

100	MoldSCORE: 100 200 300 Score										
100	200 200										
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
Fina	Final MoldSCORE										

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

MoldSCORETM: Spore Trap Report

**Location:** 21404001-1 TM16

Fungi Identified	Indo	or sam	Raw	Spores/			
	<100	1K	1	0K	>100	K count	m3
Generally able to grow indoors*							
Alternaria						ND	< 13
Bipolaris/Drechslera group						ND	< 13
Chaetomium						ND	< 13
Cladosporium						1	53
Curvularia						ND	< 13
Nigrospora						ND	< 13
Penicillium/Aspergillus types†						ND	< 13
Stachybotrys						ND	< 13
Torula						ND	< 13
Seldom found growing indoors**							
Ascospores						ND	< 13
Basidiospores						1	53
Rusts						ND	< 13
Smuts, Periconia, Myxomycetes						2	27
Total							133

100 N	Score		
			100
			100
			100
			100
			100
			100
			100
			100
			100
			100
			104
			100
			102
Final N	<b>AoldSC</b>	ORE	104

Fungi Identified	In	do	or	sa	mp]	le :	sp	ore	s/r	n3	Raw	Spores/
	<100	)		1K			10	ΣK	>	100k	count	m3
Generally able to grow indoors*												
Alternaria											ND	< 13
Bipolaris/Drechslera group											ND	< 13
Chaetomium											ND	< 13
Cladosporium											1	53
Curvularia											ND	< 13
Nigrospora											ND	< 13
Penicillium/Aspergillus types†											1	53
Stachybotrys											ND	< 13
Torula											ND	< 13
Seldom found growing indoors**												
Ascospores											ND	< 13
Basidiospores											ND	< 13
Rusts											1	13
Smuts, Periconia, Myxomycetes											ND	< 13
Total												120

100	MoldSCORE; 100 200 300 Score									
			100							
			100							
			100							
			100							
			100							
			100							
			108							
			100							
			100							
			100							
			100							
			104							
			100							
Fina	108									

Client: Hygiene Technologies International, Inc.

C/O: Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1 TM18

Fungi Identified	Indo	or	sam	ple s	spore	es/n	13	Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								ND	< 13
Basidiospores								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								ND	< 13
Total									N/A

MoldSCORE; 100 200 300 Score										
100	100 200 300									
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
Fina	100									

Fungi Identified	Ir	do	or	sai	mp	ole	<b>S</b> ]	poi	es	m	3	Raw	Spores/
	<10	0		1K				10K		>10	)0K	count	m3
Generally able to grow indoors*													
Alternaria												ND	< 13
Bipolaris/Drechslera group												ND	< 13
Chaetomium												ND	< 13
Cladosporium												1	53
Curvularia												ND	< 13
Nigrospora												ND	< 13
Other brown												1	13
Penicillium/Aspergillus types†												ND	< 13
Stachybotrys												ND	< 13
Torula												ND	< 13
Seldom found growing indoors**													
Ascospores												ND	< 13
Basidiospores												ND	< 13
Rusts												ND	< 13
Smuts, Periconia, Myxomycetes												2	27
Total													93

	MoldSCORE;											
100	100 200 300											
100	200 200											
			100									
			100									
			100									
			100									
			100									
			100									
			105									
			100									
			100									
			100									
			100									
			100									
			100									
			103									
Fina	Final MoldSCORE											

Client: Hygiene Technologies International, Inc. C/O: Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-21-2014 Date of Receipt: 04-22-2014 Date of Report: 04-23-2014

#### MoldSCORETM: Spore Trap Report

\* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a simple members of the basidiomycetes and high counts of

a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

EMLab P&K, LLC EMLab ID: 1199187, Page 4 of 4



Report for:

Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Hygiene Technologies International, Inc. 3625 Del Amo Boulevard, Suite 180 Torrance, CA 90503-8370

Regarding: Project: 21404001-1

EMĹ ID: 1202550

Approved by:

Dates of Analysis:

Spore trap analysis: 04-30-2014

Technical Manager Melissa Tracey

Service SOPs: Spore trap analysis (1038) AIHA-LAP, LLC accredited service, Lab ID #179768

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Date of Sampling: 04-29-2014

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Date of Receipt: 04-30-2014 Re: 21404001-1 Date of Report: 05-01-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		01-1TM20 OUT	214040	01-1TM21	214040	01-1TM22	214040	01-1TM23
Comments (see below)	N	Vone	N	Vone	N	Vone	N	Vone
Lab ID-Version‡:	546	5461696-1		1697-1	546	1698-1	546	1699-1
Analysis Date:	04/3	0/2014	04/3	30/2014	04/3	0/2014	04/3	30/2014
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	4	210		_		_		_
Ascospores	3	40	1	53				
Basidiospores	29	390	1	53				
Chaetonium	2	27						
Cladosporium	113	1,500	1	53				
Epicoccum								
Helicoma								
Myrothecium								
Nigrospora	1	53						
Other brown	1	13			1	13		
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts	6	320						
Smuts, Periconia, Myxomycetes	72	960	3	40				
Stachybotrys								
Stemphylium	1	53						
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		2+		2+		3+	
Hyphal fragments/m3	330		27		< 13		< 13	
Pollen/m3	160		< 13		13		< 13	
Skin cells (1-4+)	< 1+		1+		1+		1+	
Sample volume (liters)	75		75		75		75	
§ TOTAL SPORES/m3		3,600		200		13		< 13

#### **Comments:**

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC EMLab ID: 1202550, Page 2 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory. ‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	214040	01-1TM24	214040	01-1TM25	214040	01-1TM26
Comments (see below)	N	None	N	Vone	1	None
Lab ID-Version‡:	546	1700-1	546	1701-1	546	51702-1
Analysis Date:	04/3	80/2014	04/3	0/2014	04/3	30/2014
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria				_		
Ascospores	1	53				
Basidiospores						
Chaetomium						
Cladosporium			2	110	5	270
Epicoccum					1	13
Fusarium						
Helicoma					1	13
Myrothecium						
Nigrospora						
Other brown	1	13				
Other colorless						
Penicillium/Aspergillus types†					1	53
Pithomyces						
Rusts			1	13		
Smuts, Periconia, Myxomycetes			1	13	3	40
Stachybotrys						
Stemphylium					1	13
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	2+		2+		2+	
Hyphal fragments/m3	13		13		27	
Pollen/m3	< 13		< 13		13	
Skin cells (1-4+)	1+		1+		1+	
Sample volume (liters)	75		75		75	
§ TOTAL SPORES/m3		67		130		400

**Comments:** 

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

EMLab P&K, LLC EMLab ID: 1202550, Page 3 of 3

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.  $\ddagger$  A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

# MoldRANGE<sup>TM</sup>: Extended Outdoor Comparison

Outdoor Location: 21404001-1TM20 OUT

Fungi Identified	Outdoor		Typical Outdoor Data for:						Typical Outdoor Data for:				
	data	April in California† (n‡=17922)					The er	ntire yea	ar in Cal	lifornia	(n‡=20	00710)	
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	210	13	13	27	53	93	54	13	13	27	67	110	53
Bipolaris/Drechslera group	-	7	13	13	27	40	9	7	13	13	27	40	12
Chaetomium	27	8	13	13	27	40	18	8	13	13	27	47	19
Cladosporium	1,500	110	160	430	1,100	1,900	96	110	210	610	1,600	2,800	97
Curvularia	-	7	8	13	13	27	2	7	13	13	27	53	6
Epicoccum	-	7	13	13	27	53	16	8	13	13	33	53	19
Nigrospora	53	7	10	13	13	27	4	7	13	13	27	53	8
Other brown	13	13	13	13	40	53	33	13	13	13	40	53	34
Penicillium/Aspergillus types	-	53	53	160	430	690	79	53	100	210	590	1,000	84
Stachybotrys	-	8	13	13	33	67	5	7	13	13	33	67	4
Stemphylium	53	7	13	13	27	27	8	7	13	13	27	40	9
Torula	-	11	13	13	42	73	14	8	13	13	40	67	12
Seldom found growing indoors**													
Ascospores	40	27	53	110	370	710	74	25	53	110	360	690	71
Basidiospores	390	53	80	270	930	1,900	93	53	80	260	990	2,300	93
Helicoma	-	-	-	-	-	-	< 1	7	13	13	27	40	< 1
Rusts	320	13	13	24	53	93	34	13	13	13	53	80	26
Smuts, Periconia, Myxomycetes	960	13	13	40	110	210	67	13	13	40	110	210	68
§ TOTAL SPORES/m3	3,600												

<sup>†</sup>The "Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

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<sup>§</sup> Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

<sup>\*\*</sup> These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

 $<sup>\</sup>ddagger$ n = number of samples used to calculate data.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 21404001-1TM20 OUT:

Species detected		Outdoor	sample s	pores/m3	Typical o	utdoor ranges	Freq.
	<100	1K	10K	>100K	(North	America)	%
Alternaria				210	7 -	33 - 590	45
Ascospores				40	] 13 - 2	210 - 5,800	76
Basidiospores				390	] 19 - 4	450 - 24,000	92
Chaetomium				27	] 7 -	13 - 160	9
Cladosporium				1,500	] 27 - 4	180 - 10,000	90
Nigrospora				53	] 7 -	13 - 230	16
Other brown				13	] 7 -	13 - 130	23
Penicillium/Aspergillus types				< 13	] 13 - 1	170 - 2,700	68
Rusts				320	] 7 -	20 - 360	20
Smuts, Periconia, Myxomycetes				960	] 7 -	53 - 930	64
Stemphylium				53	] 7 -	13 - 93	3
Total				3,600			

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		ent ratio** /outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)				
Result: 5%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	Resul	t: 0.5714	dF: 10 Result: 0.5697 Critical value: 0.5515 Outside Similar: Yes	Score: 103 Result: Low				
Species 1	Detected	Spores/m3							
		<100	1K	10K	>100K				
	Ascospores				53				
	Basidiospores				53				
				53					
Smuts, Periconia, Myxomycetes					40				
	Total				200				

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

## MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1TM22

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		ement ratio** oor/outdoor)	corre	man rank lation*** r/outdoor)	MoldSCORE**** (indoor/outdoor)			
Result: < 1%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	R	esult: 0.1818	Resu Critical	IF: 10 lt: 0.0939 value: 0.5515 Similar: No	Score: 105 Result: Low			
Species	Detected	Spores/m3							
		<100	1K		10K	>100K			
	Other brown					13			
	Total					13			

**Location:** 21404001-1TM23

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected			
		<100 1K	10K	>100K
	None Detected			< 13

**Location:** 21404001-1TM24

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		corre	man rank lation*** r/outdoor)	MoldSCORE**** (indoor/outdoor)			
Result: 1%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	Re	sult: 0.3333	Resul Critical	IF: 10 lt: -0.1545 value: 0.5515 e Similar: No	Score: 105 Result: Low			
Species 1	Detected			Spo	ores/m3				
		<100	1K		10K	>100K			
	Ascospores					53			
	Other brown					13			
	Total					67			

EMLab P&K, LLC EMLab ID: 1202550, Page 2 of 4

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 21404001-1TM25

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)		eement ratio** loor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 3%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	F	Result: 0.4615	dF: 10 Result: 0.7758 Critical value: 0.5515 Outside Similar: Yes	Score: 103 Result: Low
Species 1	Detected			Spores/m3	
		<100	1K	10K	>100K
	Cladosporium				110
	Rusts				13
Smuts, P	Periconia, Myxomycetes				13
	Total				130

**Location:** 21404001-1TM26

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreemen (indoor/o		Spearma correlat (indoor/o	ion***	MoldSCORE*** (indoor/outdoor		
Result: 11%	dF: 5 Result: 6.7857 Critical value: 11.0705 Inside Similar: Yes	Result: (	0.3750	dF: Result: ( Critical valu Outside Si	0.0975 ue: 0.4780	Score: 108 Result: Low		
Species 1	Detected			Spore	s/m3			
		<100	1K		10K	>100K		
	Cladosporium						270	
	Epicoccum						13	
	Helicoma						13	
Penic	illium/Aspergillus types						53	
	Periconia, Myxomycetes						40	
	Stemphylium						13	
	Total						400	

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

EMLab P&K, LLC EMLab ID: 1202550, Page 3 of 4

<sup>\*\*</sup> An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

<sup>\*\*\*</sup> The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

EMLab P&K, LLC EMLab ID: 1202550, Page 4 of 4

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

Date of Sampling: 04-29-2014

Re: 21404001-1

**MoldSCORE**<sup>TM</sup>: **Spore Trap Report Outdoor Sample:** 21404001-1TM20 OUT

Fungi Identified	Ου	ıtc	do	or	san	ıpl	e	spo	res	s/n	n3	Raw	Spores/
-	<10	0			1K	_		10K		>10	00K	count	m3
Generally able to grow indoors*													
Alternaria												4	210
Bipolaris/Drechslera group												ND	< 13
Chaetomium				Ш								2	27
Cladosporium												113	1,500
Curvularia												ND	< 13
Nigrospora												1	53
Other brown												1	13
Penicillium/Aspergillus types†												ND	< 13
Stachybotrys												ND	< 13
Stemphylium												1	53
Torula												ND	< 13
Seldom found growing indoors**													
Ascospores												3	40
Basidiospores												29	390
Rusts												6	320
Smuts, Periconia, Myxomycetes												72	960
Total											3,573		

Fungi Identified	In	doo	r sai	nple	Raw	Spores/			
	<100	0	1K		10K	>	100k	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								1	53
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								1	53
Basidiospores								1	53
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								3	40
Total									200

100	MoldSCORE: 200 300								
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			120						
			103						
			100						
			100						
Fina	l MoldSC	ORE	103						

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1TM22

Fungi Identified	Indoor sample spores/m3							3	Raw	Spores/	
	<100		11	K		10	K	>10	00K	count	m3
Generally able to grow indoors*											
Alternaria										ND	< 13
Bipolaris/Drechslera group										ND	< 13
Chaetomium										ND	< 13
Cladosporium										ND	< 13
Curvularia										ND	< 13
Nigrospora										ND	< 13
Other brown										1	13
Penicillium/Aspergillus types†										ND	< 13
Stachybotrys										ND	< 13
Torula										ND	< 13
Seldom found growing indoors**											
Ascospores										ND	< 13
Basidiospores										ND	< 13
Rusts										ND	< 13
Smuts, Periconia, Myxomycetes										ND	< 13
Total											13

100	‡ Score		
			100
			100
			100
			100
			100
			100
			105
			100
			100
			100
			100
			100
			100
			100
Fina	al MoldS(	CORE	105
	•		

Fungi Identified	Indoor sample spores/m3									Raw	Spores/	
	<100			K			10K		>10	)0K	count	m3
Generally able to grow indoors*												
Alternaria											ND	< 13
Bipolaris/Drechslera group											ND	< 13
Chaetomium		Ш									ND	< 13
Cladosporium											ND	< 13
Curvularia											ND	< 13
Nigrospora											ND	< 13
Penicillium/Aspergillus types†											ND	< 13
Stachybotrys											ND	< 13
Torula											ND	< 13
Seldom found growing indoors**												
Ascospores											ND	< 13
Basidiospores											ND	< 13
Rusts											ND	< 13
Smuts, Periconia, Myxomycetes											ND	< 13
Total												N/A

100	MoldSCORE;										
100	200	300	Score								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
			100								
Fina	Final MoldSCORE										

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 21404001-1TM24

Fungi Identified	Ind	001	sam	ple	spor	es/ı	m3	Raw	Spores/
	<100		1K		10K	>	>100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora		Ш						ND	< 13
Other brown								1	13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores								1	53
Basidiospores								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes								ND	< 13
Total									67

100 <b>M</b>	Score		
			100
			100
			100
			100
			100
			100
			105
			100
			100
			100
			121
			100
			100
			100
Final N	AoldSCC	ORE	105

Fungi Identified	Indoor sample spores/m3						Raw	Spores/			
	<100	)		1K			10K	>10	0K	count	m3
Generally able to grow indoors*											
Alternaria								Ш		ND	< 13
Bipolaris/Drechslera group					Ш			Ш		ND	< 13
Chaetomium					Ш			Ш		ND	< 13
Cladosporium								Ш		2	110
Curvularia					Ш			Ш		ND	< 13
Nigrospora										ND	< 13
Penicillium/Aspergillus types†										ND	< 13
Stachybotrys										ND	< 13
Torula										ND	< 13
Seldom found growing indoors**											
Ascospores										ND	< 13
Basidiospores										ND	< 13
Rusts								$\prod$		1	13
Smuts, Periconia, Myxomycetes										1	13
Total											133

100	100 <b>MoldSCORE</b> 200 300							
			100					
			100					
			100					
			103					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
Fina	103							

Client: Hygiene Technologies International, Inc. C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu

Re: 21404001-1

Date of Sampling: 04-29-2014 Date of Receipt: 04-30-2014 Date of Report: 05-01-2014

#### MoldSCORETM: Spore Trap Report

**Location:** 21404001-1TM26

Fungi Identified	Ind	loor sam	Raw	Spores/		
	<100	1K	10K	>100k	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					5	270
Curvularia					ND	< 13
Epicoccum					1	13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					1	53
Stachybotrys					ND	< 13
Stemphylium					1	13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores					ND	< 13
Basidiospores					ND	< 13
Helicoma					1	13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes					3	40
Total		·		·		400

MoldSCORE‡ 100 200 300 Score								
			100					
			100					
			100					
			107					
			100					
			105					
			100					
			108					
			100					
			103					
			100					
			100					
			100					
			105					
			100					
			100					
Fina	al MoldSC	ORE	108					

<sup>\*</sup> The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens.

\*\* These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

EMLab P&K, LLC EMLab ID: 1202550, Page 4 of 4



Hygiene Technologies International, Inc.

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Project Number/Purcha	se Order: 2	1404001	Date Submitted: 4/4/14
Project Contact:	San Ilu	1/Khsi	Turnaround Required: Norm of 65
, ·	EMLAB		Lab Contact: Sample Receiving F
SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
21404061-1 TMOJOUT	75'L	Amorcel)	Spore Trap Analysis (Third Fungi)
21404001-1 TM02	756	Ame -COU	, , , , , , , , , , , , , , , , , , , ,
21464001-1 TM03	75 L	Alano-cell	
21404001-17M04	756	MI GOO CELL	
21404001-17195	75 L	Arroncell	
21404001-1 TM06	<b>7</b> 51_	Avrocell	
	<u> </u>		
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(a) 3.22-102-21		<u> </u>	
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1. Sampled by:	The on	4/4/14	Received by: Ooc 04/07/14 1570/
2. Relinquished by:	Friedly	on 419/148	Received by:
3. Relinquished by:	<u> </u>		Received by:
	· · · · · · · · · · · · · · · · · · ·	Please include sign	nture, date, and time
Lab Use Only:			
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Hygiene Technologies International, Inc.

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Project Number	Purcha	se Order: 2	140400	Da	ite Submitted:	
Project Contact:		sandh	u/10.451		equired: <u>No</u>	
Lab Destination		EMLLA	13 PBK		Sample 1	
SAMPLE II	)	VOLUME	MEDIA		SIS REQUESTE	
21404001-1 TO	01 9 10374	75L	A 18-0-Cell		ap Analysi	
21404001-17	708	75L	ATTO-CEL		1	1
21404001-17	209	756	P18-8-CEN			
2140400-17	40	75 L	ATTO COL			
21404001-1-1	W 13	75L	AIX-0-CEIL			
21404001-17	M12	ASL	Arro-cell			
21404001-1	Tm 13	75L	A18-0-Cell			
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3. Relinquished	by: _		Please include signat	Received by:	<del></del>	
Lab Use Only:	•••		rease months signat	ale, unie, riiu bine		
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Hygiene Technologies International, Inc.



= 7(370) 370-2474 FAX

Project Number/Purchas	se Order: 2	140400	$p_1-1$ D	ate Submitted:	04/22/14
Project Contact:			<del></del> "	equired:	
Lab Destination:				_	PECEI Ying
	VOLUME	MEDIA		YSIS REQUES	
SAMPLE ID	····	····			
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21404001 TMIS		A Kro-Cell		<del></del>	
21404001-17016		Ancocell	-	···	
21404001-1 TMIT		Ang-o-cell			
21404061-17M18	<u>75L</u>	Algro-Cell		<del></del>	
21404001-1 TM19	75L	Anr-o-cell	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	<del>V</del>
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3. Relinquished by:		Please include signs	Received by:		
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Lab Use Only:					
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Project Number/Purcha	se Order: 2	1404001-	1	Date Submitted:	4/30/14		
Project Contact:	Soundhy 1	K-hsi_		Required:M.			
Lab Destination:	EXILAB	P % \ <u></u>			Receiving		
SAMPLE ID	VOLUME	MEDIA		ANALYSIS REQUESTED			
21404001-1 TM2000t	75L	Aix-o-cell			is (Total Fungi		
214040011 TM2	75 L	AIX-V-CEN	1	<del>\                                    </del>	1		
21404001-1 TM22	752	Arro-Cell	· · ·				
21404001-171123	75L	A16-0-(e)1	-				
21404001-17M24	ንናL	A15-6-CE11					
21404001-17825	756	Arso cell	<u> </u>	<u></u>	<del></del>		
2140400 TM26	756	ALK-U-CEN					
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Special Instructions:	Lemson	n Sampli	ne (P. (L)	· · · · · · · · · · · · · · · · · · ·			
•		2300000	112 (3-7-7-7				
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2. Relinquished by:	- Transliter on	100011110012	€/Ac		04/30/M 1235 CM		
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